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ABSTRACT

The glossary is one of twenty in various subject areas of vocational education designed to assist the student in vocabulary mastery for particular vocational education courses. They are part of the Vocational Reading Power Project, Title III, E.S.E.A. This glossary is for a course in heating and air conditioning. It is divided into two parts: one provides the student with two definitions for each term listed; the second part lists the same words with space for the student's definition. It is intended that upon completion of the course, mutually agreeable definitions for each term will be arrived at by the instructor and the students. These definitions will be made available to future students taking the course. (AG)

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HEATING, AIR CONDITIONING
Glossary of Key Words

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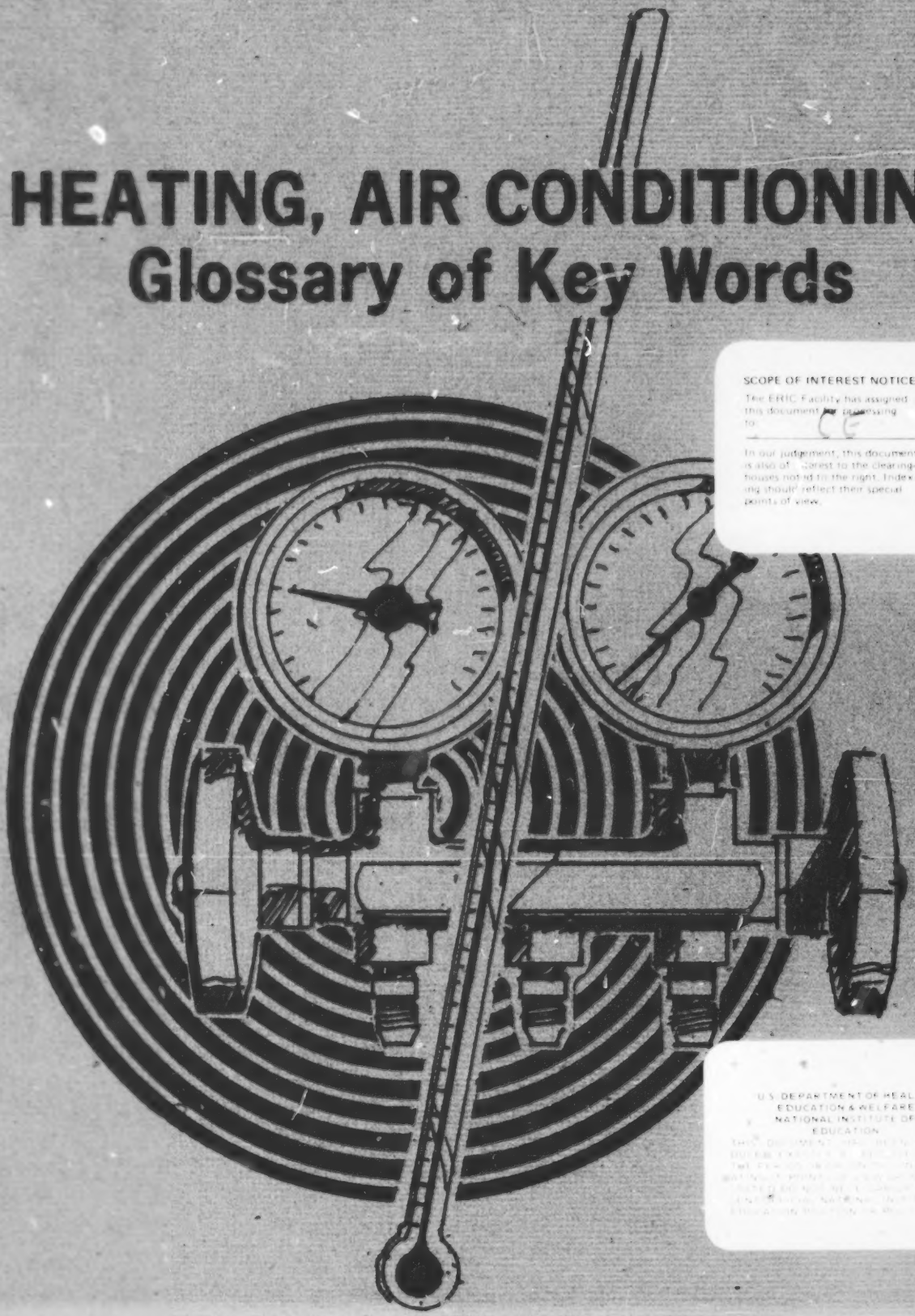

U.S. DEPARTMENT OF HEALTH EDUCATION & WELFARE NATIONAL INSTITUTE OF EDUCATION

Vocational Reading Power
E.S.E.A. Title III

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To The Student

This Glossary of Key Words was prepared to help you in your course. The words that follow were judged by your instructor to be the most important for you to understand.

Directions

The Glossary is divided into two parts. The first part lists the key words at the left side of the page. Across from the key words are two definitions for that word. The "A" definition is more difficult and specific. The "B" definition is easier and more general. During a learning activity, you are to use both definitions to help you understand. After the learning activity, you are to write your definition of the word as you understand it.

The second part just lists words. There is space for you to write your understanding of those words. Also, at the end of the booklet are blank lines. Here, you and your instructor will list and define the words which were left out.

At the end of the course, your definitions and the instructor's definitions will be joined together. These will be printed and given to the students who come after you have graduated. It is hoped that, with your help, the future students of vocational education will be greatly benefited.

RIGHTS RESERVED — NOT FOR PUBLICATION

a) PRIMARY
b) SECONDARY

TECHNICAL

ABSOLUTE ZERO

a) Attained at a temperature of 460° below zero on the Fahrenheit scale.
b) -460°F

ABSORPTION SYSTEM

a) One in which the refrigerant, as it is absorbed in another liquid, maintains the pressure difference needed for successful operation of the system.
b) Warm goes to cold.

AMBIENT TEMPERATURE

a) Temperature of fluid (usually air) which surrounds object on all sides.
b) Temperature of air around us.

AMMONIA

a) R-717. A refrigerant with a chemical combination of nitrogen and hydrogen. Commonly used in industrial units. Under ordinary conditions it is a colorless gas. It's boiling temperature is -28°F. R-717 is somewhat inflammable with proper mixture of air. R-717 attacks copper and bronze in presence of a little moisture, but does not corrode iron or steel.
b) R-717 - Refrigerant.

ATMOSPHERIC PRESSURE

a) Pressure that gases in the air exert upon the earth; measured in pounds per square inch.
b) 14.7 PSI at sea level.

BASEBOARD

a) Outlets that supply conditions to occupied areas.
b) Same.

BLOWER

a) A machine for forcing air through a furnace, building, etc.
b) Same.

BRAZED

a) Method of joining metals with nonferrous filler (without iron) using heat between 800°F and melting point of base metals.
b) Joining metals together with heat.

ABSOLUTE ZERO

ABSORPTION SYSTEM

AMBIENT TEMPERATURE

AMMONIA

ATMOSPHERIC PRESSURE

BASEBOARD

BLOWER

BRAZED

a) PRIMARY
b) SECONDARY

BRITISH THERMAL UNIT (BTU)	a) Quantity of heat required to raise temperature of one pound of water one degree fahrenheit. b) Same.
CO_2 INDICATOR	a) This instrument draws up a sample of the combustion gases. b) Same.
COLD	a) In the absence of heat, temperature considerably below normal. b) Cold.
COMPRESSOR	a) The pump of a refrigerating mechanism which draws a vacuum or low pressure on cooling side of refrigerant cycle and squeezes or compresses the gas into the high pressure or condensing side of the cycle. b) A pump which pumps the refrigerant around the cycle.
CONDENSER	a) The part of refrigeration mechanism which receives hot, high pressure refrigerant gas from compressor and cools gaseous refrigerant until it returns to liquid state. b) The part of a refrigeration cycle which removes heat from the refrigerant.
CONVECTION	a) Transfer of heat by means of movement or flow of a fluid or gas. b) Heat moving by means of air or liquid movement.
CRYOGENICS	a) Term used to describe temperatures in the range of -250°F. to absolute zero. The term is also applied to the low temperature liquefaction of gases; handling and storage insulation of containers, instrumentation, and techniques used in such work. b) Dealing with low temperatures.
DAIRY REFRIGERATION	a) Very important to deep temperature range below 50°F. for limited growth of bacteria. b) Same.

BRITISH THERMAL UNIT (BTU)

CO_2 INDICATOR

COLD

COMPRESSOR

CONDENSER

CONVECTION

CRYOGENICS

DAIRY REFRIGERATION

a) PRIMARY
b) SECONDARY

DEHUMIDIFY

a) The removal of moisture from the air within an enclosed space.
b) Taking water out of air in a room.

DESICCANT

a) A substance used to collect and mold moisture in refrigerating system. A drying agent.
b) Absorbing materials.

DEW POINT

a) Temperature at which vapor (at 100 percent humidity) begins to condense and deposit as liquid.
b) Temperature at which water will come out of an amount of air in a room or enclosure.

DRAFT

a) Forced draft; by a motor-driven fan. Natural draft; by normal chimney and combustion action.
b) Same.

DRAFT GAUGE

a) Used to measure air volumes.
b) Same.

DRAFT REGULATOR

a) To maintain draft consistency. Is installed on the flue of a heating unit as close to the chamber as possible on a horizontal line or vertical but in accordance with code.
b) Constant flow of air through chimneys.

DRY BULB TEMPERATURE

a) Air temperature as indicated by ordinary thermometer.
b) Ordinary temperature.

DUCT

a) Heating and air conditioning: a tube or channel through which air is conveyed or moved.
b) A length of large pipe with air moving through it.

ELECTRODE

a) Electrode assembly is a team of precisely engineered parts in which a spark, resulting from a combination of two properly positioned, "gapped" electrode tips, and high voltages, produced in a step up transformer, joined together to produce a "light-off." This arc lights the oil.
b) A device which ignites oil.

DEHUMIDIFY

DESICCANT

DEW POINT

DRAFT

DRAFT GAUGE

DRAFT REGULATOR

DRY BULB TEMPERATURE

DUCT

ELECTRODE

a) PRIMARY
b) SECONDARY

ENTHALPY	a) Total amount of heat in one pound of a substance calculated from an accepted temperature base. b) Amount of heat in a substance.
EVAPORATOR	a) Part of a refrigerating mechanism in which the refrigerant vaporizes and absorbs heat. b) The part of the refrigerator where the refrigerant boils from a liquid to a gas.
EXCHANGER	a) A medium of exchanging heat from the source (fire) to the recipient (air). b) A means of storing heat from the fire, to heat for the air in the enclosed space.
FLASH POINT	a) Temperature at which an oil will give off sufficient vapor to support a flash flame, but will not support continuous combustion. b) Momentary combustion.
FLUE	a) Gas or air passage which usually depends on natural convection to cause the combustion gases to flow through it. Forced convection may sometimes be used. b) The chimney part of the furnace or stove.
FULL LOAD AMPS	a) The full amperage of an electrical apparatus. The amps flowing in the electrical circuit to the apparatus when the apparatus is delivering maximum output under certain specified conditions. b) Motor is running normally.
FURNACE	a) Any device which transmits heat to its user. b) Same.
GRAINS	a) A unit of weight and equal to one/7000th of a pound. It is used to indicate the amount of moisture in the air. b) A means of measuring the amount of water in the air.
HEAT	a) Form of energy, the addition of which causes substances to rise in temperature; energy associated with random motion of molecules. b) Molecules, motion of molecules.

ENTHALPY

EVAPORATOR

EXCHANGER

FLASH POINT

FLUE

FULL LOAD AMPS

FURNACE

GRAINS

HEAT

a) PRIMARY
b) SECONDARY

HEATERS	a) Any device which transmits heat to its user. b) Same.
HEAT PUMP	a) An electrical driven device, designed to provide both heating and cooling in the same basic system. b) Same.
HERMETIC	a) Refrigeration system which has a compressor driven by a motor contained in compressor dome or housing. b) Combination motor/compressor in one.
HORSEPOWER	a) Unit of power equal to 33,000 foot lbs. of work per minute. One electric horsepower equals 746 watts. b) 33,000 foot lbs.
HUMIDISTAT	a) An electrical control which is operated by changing humidity. b) A unit which controls the amount of moisture in the air.
HYDRONIC	a) Type of heating system which circulates a heated fluid, usually water, through baseboard coils. Circulating pump is usually used. b) A hot water heating system.
LATENT (heat)	a) Heat energy absorbed in process of changing form of substance (melting, vaporization, fusion) without change in temperature or pressure. b) Heat which is required to change a solid (ice) into water (liquid).
LATENT HEAT OF EVAPORATION	a) Similar to latent heat of fusion except it takes 970 BTU's to change 212°F. water to 212°F. steam. b) 970 BTU's.

HEATERS

HEAT PUMP

HERMETIC

HORSEPOWER

HUMIDISTAT

HYDRONIC

LATENT (heat)

LATENT HEAD OF EVAPORATION

a) PRIMARY
b) SECONDARY

LATENT HEAT OF FUSION

a) Amount of heat necessary to change a solid to a liquid without a change in temperature. Latent heat of fusion occurs only at the condition where it takes 144 BTU's to change 1 lb. of water to ice at 32°F. Every solid substance in varying degrees, has a latent heat value.
b) 144 BTU's.

LOCKED ROTOR AMPS

a) (LRA) The amperage flowing in the circuit to a motor driven apparatus when the rotor of the motor is locked to prevent its movement. This amperage is typically as much as 6 times the full load current of the motor.
b) When a motor first starts up this is the surge of electricity.

LOW WATER CUT-OFF

a) Installed on boilers. These devices automatically turn off the boiler when not enough water exists in the boiler.
b) Same.

MEDIA

a) The substance by which heat can be moved from one place to another (water, air).
b) The air going through the refrigeration coils.

NONCONDENSIBLE GAS

a) Gas which does not change into a liquid at operating temperatures and pressures.
b) Gas which will not change into a liquid.

NONFERROUS

a) Group of metals and metal alloys which contain no iron.
b) No iron.

OHM'S LAW

a) Mathematical relationship between voltage, current and resistance in an electric circuit.
b) $\frac{E}{IXR}$

OIL SEPARATOR

a) A device used to return oil to the compressor.
b) Same.

LATENT HEAT OF FUSION

LOCKED ROTOR AMPS

LOW WATER CUT-OFF

MEDIA

NONCONDENSIBLE GAS

NONFERROUS

OHM'S LAW

OIL SEPARATOR

a) PRIMARY
b) SECONDARY

OVERCHARGE

a) An excessive amount of refrigerant in an enclosed refrigeration system.
b) Too much refrigerant in the system.

PSYCHROMETRIC MEASUREMENT

a) Measurement of temperature, pressure, and humidity using a psychrometric chart.
b) Using temperatures and pressures to provide human comfort.

RADIATION HEATING

a) Heating system in which warm or hot surfaces are used to radiate heat into the space to be conditioned.
b) Heat by heat rays.

R-12

a) Dichlorodifluoromethane, a popular refrigerant known as Freon 12.
b) Refrigerant 12.

R-22

a) Monochlorodifluoromethane: Synthetic chemical refrigerant.
b) Refrigerant 22.

R-502

a) Refrigerant which is azeotropic mixture of R-22 and R-115.
b) Refrigerant 502.

R-717

a) Amonia: popular refrigerant for industrial refrigerating systems; also a popular absorption system refrigerant.
b) Refrigerant 717 or amonia.

R-40

a) Methyl Chloride. Refrigerant which was used extensively in the 1920's and 1930's.
b) Refrigerant 40 or methyl Chloride.

REFRIGERANT

a) Substance used in refrigerating mechanism to absorb heat in evaporator coil by change of state from a liquid to a gas, and to release its heat in a condenser as the substance returns from the gaseous state back to a liquid state.
b) Fluid which picks up heat from one space and then gives off the heat at another place.

OVERCHARGE

PSYCHROMETRIC MEASUREMENT

RADIATION HEATING

R-12

R-22

R-502

R-717

R-40

REFRIGERANT

a) PRIMARY
b) SECONDARY

REFRIGERATION	a) Process of removing heat where it is not wanted. b) Making something cold.
REFRIGERATOR	a) An appliance used for the needs of a conditioned space.
REGISTERS	a) Combination grille and damper assembly covering on an air opening or end of an air duct. b) To distribute air.
RELATIVE HUMIDITY	a) Ratio of amount of water vapor present in air to greatest amount possible at same temperature. b) Moisture in the air.
RUN CAPACITOR	a) Very heavy duty and oil-filled type and remain in the circuit continuously. Remains in run-winding circuit at all times. This capacitor increases the power factor. b) Same.
SECOND LAW OF THERMODYNAMICS	a) Heat will flow only from material at certain temperature to material at lower temperature. b) Warm goes to cold.
SENSIBLE (heat)	a) Heat which causes a change in temperature of a substance. b) Heat in which the body can feel a change.
SHORT CYCLING	a) Term used to describe an abnormal or frequent cycling of a system or device. b) On and off.
SMOKE TESTER	a) Used to check flue gas. b) Same.
SPECIFIC HEAT	a) Amount of heat a certain substance has in capacity for absorbing heat. b) Same.
SPLIT PHASE MOTOR	a) Has two windings - main winding and an auxiliary or start winding. These motors have constant speed. b) Same.

REFRIGERATION

REFRIGERATOR

REGISTERS

RELATIVE HUMIDITY

RUN CAPACITOR

SECOND LAW OF THERMODYNAMICS

SENSIBLE (heat)

SHORT CYCLING

SMOKE TESTER

SPECIFIC HEAT

SPLIT PHASE MOTOR

a) PRIMARY
b) SECONDARY

SPLIT PHASE CAPACITOR

a) Are the electrolytic type and are used in the motor start windings to offer an increase in starting torque. All starting capacitors are intended for short and infrequent compressor starts. If in circuit too many seconds would cause its failure.
b) Kicks in extra voltage to the start windings.

SUBLIMATION

a) Condition where a substance changes from a solid to a gas without becoming a liquid.
b) Solid to gas.

SUPERHEAT

a) Temperature of vapor above boiling temperature of its liquid at that pressure.
b) Heat added to a gas at a given pressure.

TEMPERATURE DIFFERENCE

a) Difference in degrees of two substances. The temperature difference is abbreviated TD or DT.
b) TD.

THERMODYNAMICS

a) Science which deals with mechanical action or relations of heat.
b) Study of heat.

THERMOELECTRIC REFRIGERATION

a) Refrigeration which depends on peletier effect. Direct current flowing through electrical junction between dissimilar metals provides heating or cooling effect depending on direction of flow of current.
b) Refrigeration produced by electricity.

THERMOMODULE

a) Number of thermocouples used in parallel to achieve low temperatures.
b) Means of obtaining a low temperature.

THERMO OVERLOAD DEVICE

a) Senses a motor overload by virtue of the heat of the motor windings, either on motor windings or frame or housing of motor.
b) Overload.

SPLIT PHASE CAPACITOR

SUBLIMATION

SUPERHEAT

TEMPERATURE DIFFERENCE

THERMODYNAMICS

THERMOELECTRIC
REFRIGERATION

THERMOMODULE

THERMO OVERLOAD DEVICE

a) PRIMARY
b) SECONDARY

THERMOSTAT	a) Device responsive to ambient temperature conditions. b) Device to control room temperature.
TON OF REFRIGERATION	a) Refrigerating effect equal to the melting of one ton of ice in 24 hours. b) 288,000 BTU/24 hours.
TRANSFORMER	a) A device which steps up the electrical energy or vice versa. b) Same.
UNDERWRITER LABORATORIES STANDARDS	a) Minimum safety standards formulated from rules given in the national electric code. b) Same.
U-TUBE	a) U-Tube Monometer measures pressure in the air ducts in "W.C." b) Same.
VORTEX TUBE	a) Mechanism for cooling or refrigerating which accomplishes cooling effect by releasing compressed air through specially designed opening. Air expands in rapidly spiraling column of air which separates slow moving molecules (cool) from fast moving molecules (hot). b) Cooling by air.
WET BULB	a) Device used in measurement of relative humidity. Evaporation of moisture lowers temperature of wet bulb compared to dry bulb temperature in same area. b) Thermometer with wet wick on end.

THERMOSTAT

TON OF
REFRIGERATION

TRANSFORMER

UNDERWRITER LABORATORIES
STANDARDS

U-TUBE

VORTEX TUBE

WET BULB

a) PRIMARY
b) SECONDARY

GENERAL TECHNICAL

ABSORB

a) To engross wholely - absorption system.
b) Same.

ACCUMULATOR

a) A large cylindrical vessel designed to trap any refrigerant liquid which may not have changed to gas in the evaporator. In this manner any liquid refrigerant remaining in the low side of the system is prevented from entering compressor.
b) Receiver.

ACOUSTICS

a) The science of sound, as in the decible level given off by mechanical equipment.
b) The study of sound patterns

ALUMINUM

a) A metal, very light.
b) Same.

AMPERAGE

a) Electron or current flow of one coulomb per second past a given point in a circuit.
b) Rate of flow of electrons past a certain point.

AMPLIFIER

a) Electrical device which increases electron flow in a circuit.
b) Increase electron flow.

ANALYZER

a) An electrical instrument used for the purpose of testing individual components contained within the refrigeration system. (Capacitor, Relay, Compression)
b) A device used to test the parts of a refrigeration system.

APPLIANCE

a) An instrument apparatus, or a device for a particular use.
b) Same.

ARCING

a) A luminous bridge formed by the passage of a current across a gap between two conductors or terminals, due to the incandescence of the conducting vapor.
b) Electric arc.

ABSORB

ACCUMULATOR

ACOUSTICS

ALUMINUM

AMPERAGE

AMPLIFIER

ANALYZER

APPLIANCE

ARCING

a) PRIMARY
b) SECONDARY

ATMOSPHERIC

a) Pertaining to, existing in, or consisting of the atmosphere.
b) "Air" (See Technical)

BELT

a) A band of flexible material, wound around two or more wheels for the transfer of power from one wheel to the other without the use of a direct solid connection.
b) A piece of material (usually leather) to transfer power from one wheel to another.

BI-METAL

a) Temperature regulating or indicating device which works on principle that two dissimilar metals with unequal expansion rates, welded together, will bend as temperatures change.
b) Two unlike metals bonded together.

BLADE

a) The flat curved portion of an electric fan which rotates around the axis to move the air at an increased velocity.
b) The curved portion of a fan which moves around and blows air.

BLEED VALV

a) Valve with small opening inside which permits a minimum fluid flow when the valve is closed.
b) A valve with a small hole inside it.

BOILING TEMPERATURE

a) Temperature at which a fluid changes from a liquid to a gas.
b) The temperature at which a liquid will change to steam.

BOOT

a) A flexible material (usually canvas), which connects the furnace or heat supply to the duct work for the elimation of sound.
b) A canvas or rubber connection between two pieces of metal duct work.

BRINE

a) Water saturated with a chemical such as salt.
b) Salt Water.

ATMOSPHERIC

BELT

BI-METAL

BLADE

BLEED VALVE

BOILING TEMPERATURE

BOOT

BRINE

a) PRIMARY
b) SECONDARY

BRONZE

a) Durable brown alloy, consisting essentially of copper and tin.
b) A metal.

BRUSHES

a) A conductor serving to maintain electric contact between stationary and moving parts of a machine or other apparatus.
b) The contact between the rotor and stator of an electric motor.

BTU/H.R.

a) Quantity of heat required to raise temperature of one pound of water one degree fahrenheit per hour. (British Thermal Unit).
b) Can be measured with a thermometer.

BULB

a) The enlarged round portion at the end of a long slender tube of a thermometer of the glass housing of the filament of an incandescent lamp.
b) The rounded end of a thermometer or glass ball of an incandescent lamp.

BURNER

a) A part of a fixture from which a flame is issued or produced.
b) Same.

BUSHING

a) A lining for a hole, intended to insulate and/or protect from abrasion conductors which pass through it.
b) Same.

CAST

a) To form (molten metal, etc.) into a particular shape by pouring into a mold to produce an object or article by such a process.
b) A part of the refrigeration system made with a form.

CALIBRATED

a) Determine, check, or rectify the graduation.
b) Reset or set.

CAPILLARY

a) Pertaining to or occurring in, or as in a tube of fine bore.
b) Tube with small hole.

BRONZE

BRUSHES

BTU/H.R.

BULB

BURNER

BUSHING

CAST

CALIBRATED

CAPILLARY

a) PRIMARY
b) SECONDARY

CARBON	a) Widely distributed element which forms organic compounds in combination with hydrogen, oxygen, etc. b) Like charcoal.
CENTRIFUGAL	a) Moving or directed outward from the center. Pertaining to or operated by centrifugal force. b) Moving in a circular path.
CFM	a) Cubic Feed Per Minute. Amount of air passing by a certain location in one minute. b) Cubic Feed Per Minute.
CONDENSATION	a) Liquid or droplets which form when a gas or vapor is cooled below its dew point. b) Liquid drops formed from the cooling of air.
CONDENSE	a) Action of changing a gas or vapor to a liquid. b) To change vapor to liquid.
CONDENSER	a) Any device for reducing gases or vapors to liquid or solid form. b) To condense.
CONDITIONED	a) Situation with respect to circumstances; existing state or case. To condition the air. b) Conditioned air by Air Conditioning equipment.
CONDUCTION	a) Transfer of heat by molecular impact from one particle to another in contact. b) Heat transfer by metal.
CONVECTOR	a) A mechanism which aids in the transfer of heat from one substance (air) to another (refrigerant). b) An evaporator or condenser coil.
CRANKSHAFT	a) Shaft driving or driven by a crank. b) Shaft in a compressor.
CUBIC	a) Of three dimensions, solid or pertaining to solid content in the shape of a cube. b) Three dimension measure (height, length and width).

CARBON

CENTRIFUGAL

CFM

CONDENSATION

CONDENSE

CONDENSER

CONDITIONED

CONDUCTION

CONVECTOR

CRANKSHAFT

CUBIC

a) PRIMARY
b) SECONDARY

CURRENT	a) Transfer of electrical energy in conductor by means of electrons changing position. b) Transfer of electrical energy by electrons changing positions.
CYCLE	a) Series of events which have tendency to repeat same events in same order. b) A repeating of same event in order.
DAMPER	a) A movable plate for regulating the draft in a given area. b) To dampen.
DEGREE	a) A step or marking on the scale of a thermometer denoting the intensity of molecular movement. b) The reference point on a thermometer.
DROP	a) (Slang) An electrical outlet which is suspended from the ceiling either within E.M.T. or just within the wires own rubber coating. b) An electrical outlet which hangs from the ceiling.
DRUM	a) (Slang) A cylindrical box or receptacle used to store the various refrigerants and solvents. b) A round barrel-like container.
ECCENTRIC	a) A circle or disk mounted off center. Eccentrics are used to adjust controls and connect compressor drive-shafts to pistons. b) A crankshaft with a special rod mounting.
ELECTRICAL	a) "Electric." Pertaining to, derived from, produced by, or involving electricity. b) Dealing with electricity.
ELECTROMAGNETIC	a) A device consisting of an electromagnet which has an iron core center magnetized by electric current in a coil which surrounds it. b) Iron magnetized by A. C.

CURRENT

CYCLE

DAMPER

DEGREE

DROP

DRUM

ECCENTRIC

ELECTRICAL

ELECTROMAGNETIC

a) PRIMARY
b) SECONDARY

EMF	a) Electromotive force. Amount of energy supplied to an electric circuit in one second by a voltage cell, dynamo, etc. b) Electromotive force.
EVAPORATING	a) To extract moisture or liquid from, as by heat, so as to make dry or to reduce to a denser state, to turn to vapor. b) Turn to vapor.
FAHRENHEIT SCALE	a) On a Fahrenheit thermometer, under standard atmospheric pressure, boiling point of water is 212 degrees and freezing point is 32 degrees above zero on this scale. b) The common scale used for temperatures in the United States.
FAN	a) A radial or axial flow device used for moving or producing artificial currents of air. b) An electrical motor with blades to move air.
FELT	a) A nonwoven fabric of wool, fur, or hair, matted together by pressure. b) An insulating material.
FIBER GLASS	a) A material consisting of extremely fine filaments of glass which are combined in yard and woven into fabrics, or used in masses as an insulator. b) Filaments of glass.
FILTER	a) Any of various analagous devices, as for removing dust from air or eliminating certain kinds of light rays. b) Used to clean.
FINS	a) Membranous winglike or paddlelike organ attached to any of various parts. An external rib for cooling. b) Same.
FITTINGS	a) Anything employed in fitting up. b) Pipe-like attachments.

EMF

EVAPORATING

FAHRENHEIT SCALE

FAN

FELT

FIBER GLASS

FILTER

FINS

FITTINGS

a) PRIMARY
b) SECONDARY

FLOAT VALVE	a) Type of valve which is operated by a sphere or pan which floats on liquid surface and controls level of liquid. b) A valve which works like a toilet-stool tank valve.
FLOW	a) Movement in or as in a stream any continuous movement, as of thought, speech, trade, etc., like that of a stream of water. b) Moving in a continuous manner such as a waterfall.
FLYWHEEL	a) A heavy wheel which by its momentum tends to equalize the speed of machinery with which it is connected. b) A wheel used to carry the piston over dead center.
FOAM	a) An aggregation of minute bubbles formed on the surface or throughout the substance by the rapid expansion of the insulation material. b) A certain type of insulation material.
FORGED	a) Metal heated before shaping. b) Same.
GAS	a) Vapor phase or state of a substance, often referring to the various refrigerants. b) The condition which the refrigerant is in, which resembles air.
GAUGE	a) To determine capacity, quantity or force, to measure refrigeration gauges, low side and high side in PSIG. b) Low side, high side.
GENERATOR	a) A machine which converts mechanical energy into electrical energy. b) A machine for producing electricity.
GROUNDS	a) A conducting connection between an electric circuit or equipment and the earth or some similarly conducting body. b) A wire connection from an electric motor to the earth.
HEADER	a) A chamber to which the ends of a number of tubes are connected so that water or steam may pass freely from one tube to the other. b) Chamber with branches.

FLOAT VALVE

FLOW

FLYWHEEL

FOAM

FORGED

GAS

GAUGE

GENERATOR

GROUNDS

HEADER

a) PRIMARY
b) SECONDARY

HEAD PRESSURE

a) Pressure which exists in condensing side of refrigerating system.
b) Compressor out to condenser.

HEAT EXCHANGING

a) Device for transferring heat from one place to another.
b) Same.

HERMETIC

a) Airtight by fusion or sealing.
b) Self contained.

HUMIDITY

a) Percentage of the water vapor in the atmosphere to the amount required to saturate it at the same temperature.
b) Moisture in the air.

HYDROGEN

a) Colorless, odorless, inflammable gas which combines chemically with oxygen to form water. The lightest of known element.
b) A gas.

HYDROSCOPIC

a) Minute particles, found contained within the sea or any water.
b) Very small articles found in water to be seen only with microscopes.

INSTALLATIONS

a) System, machinery installed, placed in position or place.
b) Same.

INSULATION

a) To cover or surround with nonconducting material. This material is of low conductivity.
b) To insulate.

JET

a) The spout used as a nozzle to produce a certain volume through it in a predetermined length of time.
b) A hole in a piece of pipe.

KWHR

a) Kilowatt Hour. Unit of energy equivalent to that transferred or expended in one Kilowatt of power, approximately 1.34 H.P. hour.
b) Approximately 1.34 H.P. Hour.

HEAD PRESSURE

HEAT EXCHANGING

HERMETIC

HUMIDITY

HYDROGEN

HYDROSCOPIC

INSTALLATIONS

INSULATION

JET

KWHR

a) PRIMARY
b) SECONDARY

LAPPING	a) Smoothing a metal surface to a high degree of refinement of accuracy using a fine abrasive. b) The process to make metal very smooth on the surface.
LEAK	a) An unintended hole, crack, or the like by which refrigerant, oil or propane or natural gas, etc., enters or escapes. b) A hole or crack in a pipe or tube.
LOUVER	a) One of a number of slitlike openings in a window or ventilation mechanism to let in light or air. b) Boards or pieces of metal used to close off air supply.
LUBRICATION	a) To apply some oily, greasy or other substance, in order to diminish friction, oil or grease, as parts of mechanism. b) To make slippery.
MAGNETIC FIELD	a) Space in which magnetic lines of force exist. b) Area where magnetic lines exist.
MAGNETISM	a) An electronic force which causes a magnet to attract items made of steel. b) An electric force.
MANUFACTURE	a) The making of goods or wares by manual labor or by machinery. b) One who produces goods.
MOISTURE	a) Water or anything moist. b) Water.
MOTOR	a) A machine which converts electrical energy into mechanical energy. b) An electrical driver for compressors.
NON-OVERLOADING	a) Referring to a fan in which the fan blades are so constructed so that the fan motor will not be stopped or overheated by the volume of air passing through it. b) A fan which will not overwork its motor.

LAPPING

LEAK

LOUVER

LUBRICATION

MAGNETIC FIELD

MAGNETISM

MANUFACTURE

MOISTURE

MOTOR

NON-OVERLOADING

a) PRIMARY
b) SECONDARY

NOZZLE	a) A projecting spout, terminal discharging pipe, or the like as of a bellows or nose outlet. b) The spout of an oil or gas burner.
ORIFICE	a) Accurate size opening for controlling fluid flow. b) An exact sized hole in a pipe or tube.
OVERFLOW	a) That which flows or runs over, to carry off the overflow from a fountain. b) The excess water runoff.
PER	a) For each period of elapsed time. b) An amount of time.
PISTON	a) Close fitting part which moves up and down in a cylinder. b) A part which moves up and down in a compressor.
PITCH	a) The angle of the bend in a fan blade. b) Same.
PLASTIC	a) Any group of a synthetic or natural organic hardened, including many types of resins, resinoids, polymers, cellulose derivatives, casein materials. They are usually known by trademark names such as Bakelite, Vinylite, Lucite, etc. b) Type of material.
POLYSTYRENE	a) A plastic used as an insulation in some refrigerator cabinet structures. b) A type of insulation for refrigerators.
PROPELLER	a) A device having a revolving hub with radiating blades for propelling a steamship, fan, etc. b) Driving agent.
PROPERTY	a) An essential or distinctive attribute or quality of a thing or chemical makeup. b) A part of a refrigerant makeup.

NOZZLE

ORIFICE

OVERFLOW

PER

PISTON

PITCH

PLASTIC

POLYSTYRENE

PROPELLER

PROPERTY

a) PRIMARY
b) SECONDARY

PSI	a) Pounds Per Square Inch 14.7. b) Same.
PSIG	a) Pounds Per Square Inch Gauge. b) Same.
PURGING	a) Releasing of compressed gas to atmosphere through some part or parts for the purpose of removing contaminants from that part or parts. b) Letting refrigerant out of a refrigeration system.
RADIATION	a) Transfer of heat by heat rays. b) Heating of an area as the sun does.
RAREFY	a) To become rare or less dense, become thinned. b) To thin air as in outer space.
RECEIVER	a) A cylinder in a refrigerating system used for storing liquid refrigerant. b) Same.
RECIPROCATING	a) Action in which the motion is back and forth in a straight line. b) Movement of some compressor pistons.
RECIRCULATED	a) To move in a circle or circuit, move or pass through a circuit back to the starting point and over again. b) From the start to the finish and back again.
RECTIFIER, ELECTRIC	a) An electrical device for converting AC into DC. b) A device to change AC current into DC current.
REGISTER	a) To make entries. b) Same (See Technical.)
RESIDENTIAL	a) Pertaining to residences: A residential section. b) Same.

PSI

PSIG

PURGING

RADIATION

RAREFY

RECEIVER

RECIPROCATING

RECIRCULATED

RECTIFIER, ELECTRIC

REGISTER

RESIDENTIAL

a) PRIMARY
b) SECONDARY

ROTARY	a) Turning round as on an axis, taking place around an axis. Rotary compressor, one in which liquid is pumped by using rotary motion. b) Rotary motion.
ROTOR	a) Rotating part of a mechanism. b) Part in an electric motor which moves around with the crankshaft.
SATURATED	a) Soaked, imprenated, or imbued thoroughly, brought to a state of saturation. b) Very wet.
SCALE	a) A coating or incrustation as on the inside of a boiler, formed by the precipitation of salts from the water. b) A coating which forms on water cooled condenser coils.
SEMICONDUCTOR	a) A material that has electrical properties of current flow, between a conductor and an insulator. b) A material which will allow some current flow.
SOLENOID VALVE	a) A device used to open or close a line passage by the use of a magnet coil and plunger which operates on the principle of electromagnetism. b) Same.
SPDT	a) Single Pole, Double Throw Switch. b) Same.
SPST	a) Single Pole, Single Throw Switch. b) Same.
STATOR, MOTOR	a) Stationary part of an electric motor. b) The part of a compressor motor which does not move.
SUCTION LINE	a) Tube or pipe used to carry refrigerant gas from the evaporator to the compressor. b) Low pressure side of refrigeration system.

ROTARY

ROTOR

SATURATED

SCALE

SEMICONDUCTOR

SOLENOID VALVE

SPDT

SPST

STATOR, MOTOR

SUCTION LINE

a) PRIMARY
b) SECONDARY

SYNCHRONOUS	a) Occurring at the same time; coinciding in time contemporaneous; simultaneous. b) Movements occurring at the same time.
TEMPERATURE	a) Degree of hotness or coldness as measured by a thermometer; measurement of speed of motion of molecules. b) Intensity of heat.
UNIT	a) A single thing or person; any group of things or persons regarded as an individual. b) A refrigeration or heating system.
VACUUM	a) Reduction in pressure below atmospheric pressure. b) Same.
VALVES	a) Device for closing. In refrigeration compressors they work under pressures to release refrigerant. b) Device for opening and closing.
VAPORIZATION	a) The process by which a liquid is converted to a vapor; as water into steam. b) Boiling of a liquid into steam or vapor.
VELOCITY	a) Rapidity of motion or operation, swiftness, quickness. b) Speed.
VENTILATE	a) To provide with fresh air in place of air which is vitiated. b) Movement of air.
VERTICAL	a) Being in a position or direction perpendicular to the plane of the horizon, upright, plump. b) Straight up and down.
VOLATILE	a) Evaporating rapidly; passing off readily in the form of vapor; a volatile oil.

SYNCHRONOUS

TEMPERATURE

UNIT

VACUUM

VALVES

VAPORIZATION

VELOCITY

VENTILATE

VERTICAL

VOLATILE

a) PRIMARY
b) SECONDARY

VOLTAGE

a) Term used to indicate the electrical potential or electromotive force in an electrical circuit. It is voltage or electrical pressure which causes current to flow.
b) Current.

VOLUMETRIC EFFICIENCY

a) Term used to express the relationship between the actual performance of a compressor or of a vacuum pump and calculated performance of the pump based on its displacement versus its actual pumping ability.
b) The ratio of a compressors actual and theoretical pumping capacities.

WRENCH

a) A tool for catching upon or gripping and turning or twisting the head of a bolt, nut, pipe, or the like. Commonly consisting of a bar of metal with fixed or adjustable jaws.
b) Tool.

VOLTAGE

VOLUMETRIC EFFICIENCY

WRENCH